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C L A I M S

1. A vessel (1) for storing particulate matter, such as pulverised coal or fly ash, comprising a main part (2) and, at its bottom portion, at least one discharge device (3), which comprises a converging outer shell (10) and a permeable, converging inner shell (14) positioned in the outer shell (10), the discharge device (3) being connected to the main part (2) by means of a first flange (9) at or near the lower rim of the bottom portion of the main part (2) and a second flange (11) at or near the upper rim of the outer shell (10), whereby the inner shell (14) is secured at or near its upper rim to the inner wall of the outer shell (10) of the discharge device (3).

2. The vessel (1) of claim 1, wherein the inner shell (14) has been attached to the inner wall of the second flange (11).

3. The vessel (1) of claim 2, wherein the inner wall of the second flange (11) is provided with at least one lug or ring (13) and the inner shell (14) is attached to this lug or ring (13).

4. The vessel (1) of claim 2 or 3, wherein an element (22) for matching the inner wall of the main part (2) of the vessel (1) to the inner wall of the inner shell (14) has been attached to the inner wall of the first flange (9).

5. The vessel (1) according to any one of claims 2-4, wherein the upper rim (15) of the inner shell (14) extends at least substantially flush with the face of the second flange (11).

6. The vessel (1) according to any one of the claims 2-5, wherein the connection between the inner shell (14) and the outer shell (10) is sealed by means of a gasket (13').

5 7. The vessel (1) according to claim 1, wherein the inner shell (14) is secured at or near its upper rim to the inner wall of the outer shell (10) of the discharge device (3) to avoid clamping a flange forming the upper rim of the inner shell (14) between said first flange (9) and second flange (11).

10 8. A vessel (1) for storing particulate matter, such as pulverised coal or fly ash, comprising a main part (2) and, at its bottom portion, at least one discharge device (3), which comprises a converging outer shell (10) and a permeable, converging inner shell (14) positioned in the outer shell (10), the discharge device (3) being connected to the main part (2) by means of a first flange (9) at or near the lower rim of the bottom portion of the main part (2) and a second flange (11) at or near the upper rim of the outer shell (10), whereby the outer shell (10) comprises, at its bottom portion, a third flange (12) and whereby the lower portion (17) of the inner shell (14) is cylindrical and positioned in line with the central opening of the third flange (12) and/or extends through this opening.

25 9. The vessel (1) according to claim 8, wherein a stuffing box assembly (23) is positioned between the cylindrical lower portion (17) of the inner shell (14) and the outer shell (10), which assembly (23) seals the cavity (20) defined by the inner shell (14) and the outer shell (10).

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10. The vessel (1) according to any one of the preceding claims, wherein all the said flanges (9,11,12) are standardised flanges.

11. The vessel (1) according to any one of the preceding claims, wherein the outer shell (10) is provided with at least one inlet (10') for injecting gas into the cavity (20) defined by the outer shell (10) and the inner shell (14), which inlet (10') runs substantially perpendicular to the central axis (A) of the vessel (1).

12. A discharge device (3) for use in a vessel (1) for storing particulate matter, such as pulverised coal or fly ash, comprising a converging outer shell (10) and a permeable, converging inner shell (14) positioned in the outer shell (10), wherein the inner shell (14) is secured at or near its upper rim to the inner wall of the outer shell (10).

13. The discharge device (3) of claim 12, wherein the inner shell (14) has been attached to the inner wall of the outer shell (10).

14. The discharge device (3) of claim 12 or 13, comprising a flange (11) forming the upper rim of the outer shell (10), the inner shell (14) being attached to the inner wall of this flange (11).

15. The discharge device (3) of claim 14, wherein the upper rim (15) of the inner shell (14) extends at least substantially flush with the upper rim of the said flange (11).

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